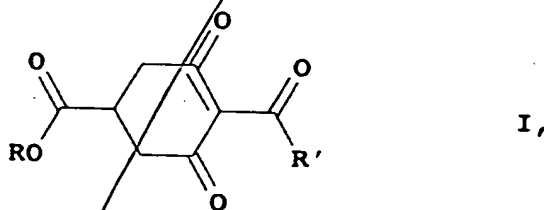


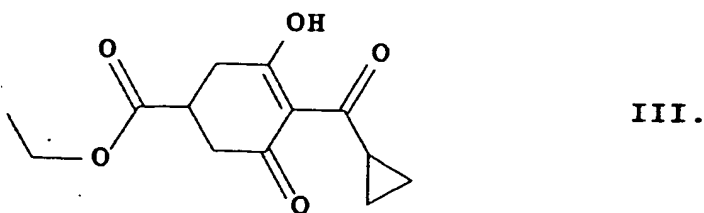
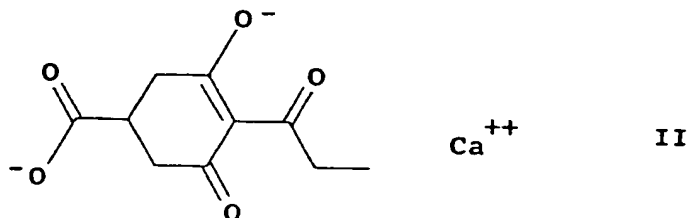
**CLAIMS AS FILED - OZ 0050/50061**

1. A method of increasing and qualitatively modifying the content of flavonoids and phenolic constituents in grapevines, cherries, plums, sloes, blueberries, strawberries, citrus fruit, pawpaw, red cabbage, broccoli, Brussels sprouts, kale, carrots, parsley, celery/celeriac, onions, garlic, tea, coffee, cacao, maté, hops, soya, oilseed rape, oats, wheat, rye, *Aronia melanocarpa* or *Ginkgo biloba*, which comprises treating the plants with an acylcyclohexadione of the formula I



where R is hydrogen or C<sub>1</sub>-C<sub>6</sub>-alkyl and R' is C<sub>1</sub>-C<sub>6</sub>-alkyl or C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, or with a suitable salt of I.

2. A method as claimed in claim 1, wherein the plants are treated with an acylcyclohexadione of the formula II and/or the formula III



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3. A method as claimed in claim 1, wherein the content of flavonoids and phenolic constituents of grapevines is increased and qualitatively modified.
4. A method as claimed in claim 1, wherein the content of flavonoids with an unsubstituted C atom in the 3-position, and of the oligomers and polymers of these flavonoids, is increased.
5. The use of grapevines, cherries, plums, sloes, blueberries, strawberries, citrus fruit, pawpaw, red cabbage, broccoli, Brussels sprouts, kale, carrots, parsley, celery/celeriac, onions, garlic, tea, coffee, cacao, mate, hops, soya, oilseed rape, oats, wheat, rye, *Aronia melanocarpa* or *Ginkgo biloba*, which have been treated with an acylcyclohexadione as set forth in claim 1, of parts of these plants or of products prepared with these plants (juices, teas, extracts, fermentation products and fermentation residues) for the preparation of curative compositions, health-promoting compositions or tonics for humans and animals, and of cosmetics.
6. An extract, juice, wine or press cake with an increased qualitatively modified content of flavonoids and other phenolic constituents, obtainable from grapes of a red grapevine variety, the grapevine plant previously having been treated with at least one acylcyclohexadione of the formula I, II or III as set forth in claim 1.

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